



## VIRTUAL NET METERING

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### "TRADITIONAL" VS "VIRTUAL" NET METERING

Traditional net metering allows a renewable energy system's owner to receive billing credits for power generated by the system, in effect running the meter "backwards." If the system produces more power than the owner used in a billing period, the credits can be applied to future bills.

With virtual net metering, the system's owner can share these excess credits "virtually" with other owner-designated accounts, thus running their meters backwards too.

For additional information comparing traditional and virtual net metering see OLR Report [2013-R-0390](#).

### ISSUE

This report describes the virtual net metering program, including data on (1) projects that are currently operational or approved but waiting to proceed, (2) the value of distributed virtual net metering credits, and (3) the program's cost to ratepayers.

### SUMMARY

Virtual net metering generally allows a renewable energy system's owner to share the billing credits that are generated when the system produces more power than the owner uses. In Connecticut, the law limits virtual net metering to municipal, state agency, and agricultural customers who meet certain requirements ([CGS § 16-244u](#)). Among other things, the law specifies (1) which types of renewable energy systems can participate for each customer type, (2) generating capacity limits, (3) the types of accounts that can share virtual net metering billing credits with the host facility, and (4) that credits are calculated at the

wholesale power generation rate plus a portion of the electric company's transmission and distribution rates which decreases from 80% to 40% over three years.

The law also caps total virtual net metering credits at \$10 million per year, divided between the state's electric distribution companies (EDCs, Eversource and United Illuminating) in proportion to their respective consumers' electrical load. Within that total, each eligible customer type (municipal, state agency, and agricultural) is further limited to 40% of the allowed credits.



According to the EDCs, there are currently two operational virtual net metering projects in the state. Both are agricultural projects in Eversource's service area. Eversource has approved six other agricultural projects and 11 municipal projects that are not yet operational. Three other municipal projects are on the company's waiting list because the 11 approved projects are expected to hit the credit cap for municipal projects. Eversource has distributed \$21,504 in credits to the two operational agricultural projects thus far in 2015. We have requested data on the virtual net metering program's cost to Eversource's ratepayers and are awaiting a response from the company. We will update this report once the information has been provided.

United Illuminating (UI) has approved three municipal projects in its service area that are not yet operational. No projects are currently waiting due to credit cap limits and the company has not distributed any virtual net metering credits to date. With no operational projects, UI has not incurred any direct costs for the program to date.

## **VIRTUAL NET METERING**

### ***Eligibility Criteria***

By law, virtual net metering is open to (1) municipalities and state agencies with class I (e.g., solar or wind) or class III (cogeneration) energy systems and (2) agricultural customers with class I energy systems. In either case, the system must be served by an EDC and cannot have a generating capacity over three megawatts. An agricultural customer must own the system on land he or she owns or controls. Municipal and state agency customers can alternatively lease or enter into a long-term contract for the system and there are no restrictions on its location. As with traditional net metering, the electric company must connect the system to the grid and provide metering equipment.

### ***Beneficial Accounts***

Virtual net metering allows a participating customer (the "host") to transfer the billing credits generated when it produces excess power to customer-designated "beneficial accounts." The beneficial accounts must be customers of the same EDC as the customer host. Municipal or state hosts can designate up to five beneficial accounts that are related to the municipal or state agency and up to five additional non-state or municipal beneficial accounts that are critical facilities (e.g., hospitals and commercial areas of municipalities) connected to a microgrid. Agricultural hosts can designate up to ten beneficial accounts, each of which must (1) use electricity for agriculture, (2) be a municipality, or (3) be a noncommercial critical facility (e.g., a police or fire station). The administering EDC must allocate the credits

among the beneficial accounts in proportion to their consumption for the previous 12 billing periods.

### ***Credits***

Energy produced by the host is first used to reduce the host's electricity consumption. Surplus production is then assigned "virtually" to reduce the electric bills of the host's beneficial accounts. The EDC must assign a virtual net metering credit to the host's beneficial accounts for the month after the host generates the excess power. Unlike traditional net metering, the credit is less than the full retail rate. Specifically, the credit is calculated as the generation service component (the wholesale cost of power) plus a decreasing portion of the beneficial accounts' transmission and distribution charges. The credit is for 80% of transmission and distribution charges during a facility's first year operating, 60% during its second year, and 40% for every year after.

If the host generates more power than the host and its beneficial accounts use in a billing period, the excess "unassigned" credits accumulate and are applied to future electric bills within the calendar year. At the end of each year, the company must compensate the host for any unassigned credits at its standard service rate (the generation rate charged to customers who do not choose a retail electric supplier) plus the applicable portion of the transmission and distribution charges. In practice, pursuant to the Public Utilities Regulatory Authority's (PURA) decision in [Docket 13-08-14](#), the annual compensation for unassigned credits is provided as a credit to the host's electric bill and not an annual "cash out."

### ***Credit Caps***

The law required PURA to develop the administrative processes and specifications for the virtual net metering program, which it has done through [Docket 13-08-14](#) and its subsequent re-opened proceedings. By law, these specifications include an annual \$10 million cap for credits provided to beneficial accounts and the year-end compensation provided to the customers participating in the program. The cap is apportioned between Eversource and UI based on their respective consumers' load, which in practice, amounts to roughly an \$8 million cap for Eversource and \$2 million cap for UI.

Each category of eligible customers (municipal, state, and agricultural) is also capped so that it can receive no more than 40% of the total credits. Thus, within Eversource's \$8 million credit cap, participating municipal customers cannot receive virtual net metering credits totaling more than \$3.2 million annually. Under PURA's procedures, each approved project is assigned an annual virtual net metering cap allotment within its customer category based on information provided during the

application process. Projects that are approved but not yet operational must become operational within one year after the approval or receive a one-time, six-month extension. Failure to do so results in denial of the application so that the EDC can assign the project's assigned credit cap allotment to other applicants waiting for approval.

## VIRTUAL NET METERING DATA

Table 1 below shows Eversource's and United Illuminating's virtual net metering projects to date.

**Table 1: Eversource and United Illuminating Virtual Net Metering Projects**

	<i>Eversource</i>	<i>UI</i>
Operational projects	Agricultural: 2 Municipal: 0 State: 0	Agricultural: 0 Municipal: 0 State: 0
Approved but not yet operational projects	Agricultural: 6 Municipal: 11 State: 0  (2 additional agricultural projects are currently under review)	Agricultural: 0 Municipal: 3 State: 0
Projects waiting for approval due to credit caps	Agricultural: 0 Municipal: 3 State: 0	Agricultural: 0 Municipal: 0 State: 0
2015 credits distributed	Agricultural: \$21,504 Municipal: \$0 State: \$0	Agricultural: \$0 Municipal: \$0 State: \$0
2015 ratepayer costs	TBD	No direct costs to date.

Source: Eversource and United Illuminating

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